UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604

DATE: JUN 2 8 2013

SUBJECT: Clean Air Act Inspection of Sterling Steel Company, LLC in Sterling, Illinois

FROM: Dakota Prentice, Environmental Engineer
Air Enforcement and Compliance Assurance Section (IL/IN)

THRU: Nathan Frank, Chief
Air Enforcement and Compliance Assurance Section (IL/IN)

TO: File

Date of Inspection
June 23, 2013

U.S. EPA Representatives
Alexandra Letuchy, U.S. EPA
Dakota Prentice, U.S. EPA

Purpose of Inspection
The purpose of the inspection was to assess compliance of Sterling Steel Company, LLC ("Sterling Steel") with the opacity limits in New Source Performance Standard (NSPS), Subpart AAa, Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983 and National Emission Standard for Hazardous Air Pollutants for Area Sources: Electric Arc Fumace Steelmaking Facilities (NESHAP YYYYY).

Company Location/Mailing Address
Sterling Steel Company, LLC
101 Avenue K
Sterling, Illinois 61081

Opacity Observations
Alexandra Letuchy and Dakota Prentice (EPA Inspectors) arrived outside the Sterling Steel facility at 101 Avenue K in Sterling (the Facility) at approximately 5:00 PM on June 23, 2013.

Using SunEarthTools.com, EPA inspectors determined the locations that readings could be taken (see Figure 1). The yellow dot with the blue triangle shows the approximate location of the electric arc furnace within the melt shop and the yellow half arc indicates the location of the sun from sunrise to sunset on June 23, 2013. Method 9 requires that the sun is located within 140° behind the reader during the opacity readings. Figure 1 shows that Method 9 readings could be performed from the location labeled "M9 Reading Location" after 5:00 PM.

Figure 1: SunEarthTools Map for June 23, 2013, Annotated for 5:00 PM Reading

Dakota Prentice performed Method 9 readings of the melt shop at 5:17 PM and 5:44 PM from this location. The Method 9 reading performed at 5:17 PM identified a maximum six minute average opacity of 7.1 percent. The Method 9 reading performed at 5:44 PM identified a maximum six minute average opacity of 10.8 percent.

EPA inspectors chose not to enter the facility to perform observations, as Method 9 readings could be performed off site. Sterling Steel was not notified of EPA's presence during the inspection. EPA inspectors completed the off-site inspection at 6:30 pm.

Attachments

Method 9 Visible Emission Form - 5:17 PM Opacity Reading

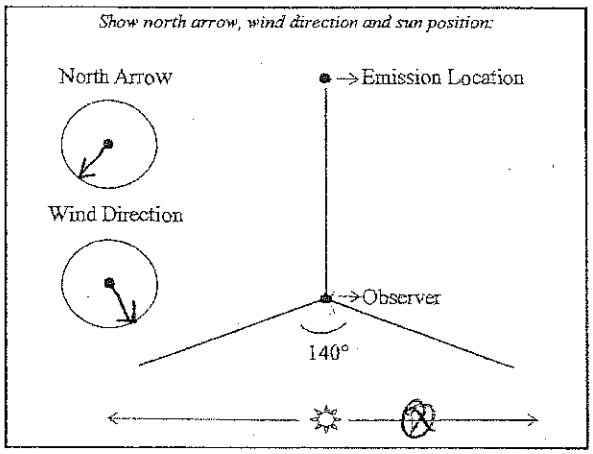
Method 9 Visible Emission Form - 5:44 PM Opacity Reading

METHOD 9 VISIBLE EMISSION OBSERVATION FORM

Date: 6/23/13
Observer: D. Prentice
Affiliation: U.S. EPA

Source name: Sterling Steel
Source address: 101 Avenue K
Sterling, IL

Facility type: Steel Plant



Emission location (stack, roof, etc.):	Estimated emission location height:
roof/duct	~150 feet
Direction from emission location:	Estimated distance to emission location:
northwest	~915 feet

Plume color:	white
Background:	roof/duct
Background color:	brown/black
Sky color:	blue
Cloud color:	white/gray
Estimated wind speed:	5 mph
Approximate wind direction:	SE to NW
Temperature:	~78 °F

Additional Comments (photos/video taken, etc.):

40 C.F.R. Part 60, Appendix A, Reference Method 9

2.3 Observations. "Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present."

2.3.1 Attached Steam Plumes. "When condensed water vapor is present within the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible. The observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made."

2.3.2 Detached Steam Plume. "When water vapor in the plume condenses and becomes visible at a distinct distance from the emission outlet, the opacity of emissions should be evaluated at the emission outlet prior to the condensation of water vapor and the formation of the steam plume."

"On an overcast day when no shadows are observed and the lighting is diffuse or flat, this rule might not be as important from a scientific standpoint as on a bright, sunny day. Observers might have trouble defending their positions in court if they disregard the rule. The best practice for an observer is to always have the sun at his or her back, even if it is not visible and no shadows are cast." http://www.epa.gov/ttn/emc/methods/VECourse.pdf

Time	Minute	Seconds 0	15	30	45	Steam Plume? Attached	Detached	Comments
Start	1	5	20	15	20			no steam plume
	2	20	15	25	20			
	3	15	10	15	15			
	4	5	5	5	10			
	5	5	5	5	10			
	6	5	5	5	0			
	7	5	10	5	5			
	8	5	5	5	5			
	9	5	5	5	5			
	10	0	5	5	5			
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							
	27							
	28							
	29							
	30							

(Continued on other side →)

Signature:
Date last certified: April 16, 2013

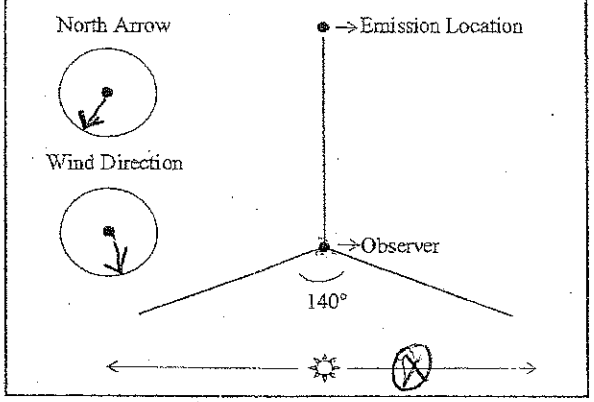
METHOD 9 VISIBLE EMISSION OBSERVATION FORM

Date: 6/23/13
Observer: D. Prentice
Affiliation: U.S EPA

Source name: Sterling Steel
Source address: 101 Avenue K
Sterling, IL

Facility type: Steel Plant

Show north arrow, wind direction and sun position:



Emission location (stack, roof, etc.):	Estimated emission location height:
roof/duct	~ 150 feet
Direction from emission location:	Estimated distance to emission location:
northwest	~915 feet

Plume color:	white
Background:	roof/duct
Background color:	brown/black
Sky color:	blue
Cloud color:	wh.k/gry
Estimated wind speed:	5 mph
Approximate wind direction:	SE to NW
Temperature:	~78 °F

Additional Comments (photos/video taken, etc.):

40 C.F.R. Part 60, Appendix A, Reference Method 9

2.3 Observations. "Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present."

2.3.1 Attached Steam Plumes. "When condensed water vapor is present within the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible. The observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made."

2.3.2 Detached Steam Plume. "When water vapor in the plume condenses and becomes visible at a distinct distance from the emission outlet, the opacity of emissions should be evaluated at the emission outlet prior to the condensation of water vapor and the formation of the steam plume."

"On an overcast day when no shadows are observed and the lighting is diffuse or flat, this rule might not be as important from a scientific standpoint as on a bright, sunny day. Observers might have trouble defending their positions in court if they disregard the rule. The best practice for an observer is to always have the sun at his or her back, even if it is not visible and no shadows are cast." http://www.epa.gov/ttn/emc/methods/VECourse.pdf

		Seconds				Steam Plume?		
Time	Minute	0	15	30	45	Attached	Detached	Comments
5:17	1	10	10	15	10			no steam plume
	2	15	20	10	10			
	3	10	10	5	10			
	4	5	5	10	5			
	5	5	5	0	0			
	6	0	0	0	0			
	7	0	0	0	5			
	8	0	0	0	0			
	9	0	0	0	0			
	10	0	0	0	0			
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							
	27							
	28							
	29							
	30							

(Continued on other side →)

Signature:
Date last certified: April 16, 2013

Standard bcc's: Official file copy w/attachment(s)

Other bcc's: Alexandra Letuchy (AE-17J)
Dakota Prentice (AE-17J)

Creation Date:	June 25, 2013
Filename:	F:\2012\Sterling Steel Company\Inspection Report\Inspection 4\Sterling Inspection Report 062313 v1.docx
Legend:	ARD:AECAB:AECAS(IL/IN): D. Prentice